

RESPONSE TO RESTRICTION REQUIREMENT
U.S. Serial No.: 09/743,482

comprising a carrier molecule and a peptide comprising the 11 N-terminal amino acids of a rat zeta-chain.

40. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of claim 39 wherein said nucleic acid molecule comprises a nucleic acid sequence encoding at least two CDRs of said variable region.

41. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of claim 39 or 40, wherein said nucleic acid molecule comprises a nucleic acid sequence encoding three CDRs of said variable region.

42. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of any one of claims 39 to 41 wherein said nucleic acid sequence encodes a V_H chain.

43. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of any one of claims 39 to 41 wherein said nucleic acid sequence encodes a V_L chain.

44. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of any one of claims 39 to 43 which is a DNA molecule.

45. An antibody or fragment or derivative thereof encoded by a nucleic acid molecule comprising a nucleic acid sequence encoding at least two CDRS of a V_H chain of an antibody, said antibody specifically interacting with the extracellular domain of the human

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zeta-chain, said antibody being obtainable by immunizing a rat with Jurkat cells and subsequently with a conjugate comprising a carrier molecule and a peptide comprising the 11 N-terminal amino acids of a rat zeta-chain.

46. An antibody or fragment or derivative thereof encoded by a nucleic acid molecule comprising a nucleic acid sequence encoding at least two CDRs of a V_L chain of an antibody, said antibody specifically interacting with the extracellular domain of the human zeta-chain, said antibody being obtainable by immunizing a rat with Jurkat cells and subsequently with a conjugate comprising a carrier molecule and a peptide comprising the 11 N-terminal amino acids of a rat zeta-chain.

47. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of any one of claims 39 to 44 wherein said CDR has one of the following nucleotide sequences:

- (a) SEQ ID No. 1
- (b) SEQ ID No. 3
- (c) SEQ ID No. 5
- (d) SEQ ID No. 7
- (e) SEQ ID No. 9
- (f) SEQ ID No. 11.

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48. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of claim 42 wherein said V_H-chain has the nucleotide sequence of SEQ ID No. 13 or encodes the amino acid sequence of SEQ ID No. 14.

49. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of claim 43 wherein said V_L-chain has the nucleotide sequence of SEQ ID No. 15 or encodes the amino acid sequence of SEQ ID No. 16.

50. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of claim 45 wherein said V_H-chain has the nucleotide sequence of SEQ ID No. 13 or encodes the amino acid sequence of SEQ ID No. 14.

51. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of claim 46 wherein said V_L-chain has the nucleotide sequence of SEQ ID No. 15 or encodes the amino acid sequence of SEQ ID No. 16.

52. An antibody or fragment or derivative thereof encoded by the nucleic acid molecule of any one of claims 39 to 44 wherein the CDR encodes one of the amino acid sequences:

- (a) SEQ ID No. 2
- (b) SEQ ID No. 4
- (c) SEQ ID No. 6
- (d) SEQ ID No. 8

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(e) SEQ ID No. 10

(f) SEQ ID No. 12.

53. A vector comprising a nucleic acid molecule encoding an antibody or fragment or derivative of any one of claims 39 to 52.

54. A host transfected with a vector according to claim 53 and producing an antibody or fragment or derivative thereof of any one of claims 39 to 52.

55. A method of producing an antibody or fragment or derivative thereof encoded by the nucleic acid molecule of any one of claims 39 to 52 comprising culturing the host of claim 54 under suitable conditions and isolating said antibody or fragment or derivative thereof from the culture.

56. The antibody of claims 39 to 52 which is a monoclonal antibody.

57. The antibody of claims 39 to 52 which is a bispecific antibody.

58. The antibody of claim 57 wherein the first specificity is for the extracellular domain of the human zeta-chain on the surface of an intact cell and the second specificity is for an optionally different molecule on the surface of a T-lymphocyte, a natural killer cell or a precursor thereof.

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59. The antibody of claim 57 wherein the first specificity is for the extracellular domain of the human zeta-chain on the surface of an intact cell and the second specificity is for a different molecule on the surface of a different cell.

60. The antibody of claim 59, wherein said different cell is a cell different from a T-cell, an NK-cell or a precursor thereof.

61. The antibody of claim 59 or 60 wherein said different molecule is a virus encoded antigen, a tumor-associated antigen or a surface antigen either on antigen presenting cells (APCs) or on non-APCs.

62. The antibody of claim 61, wherein the APC is a dendritic cell.

63. The derivative of claims 39 to 52 which is an scFv chain.

64. The antibody of claim 56 which is an IgM.

65. The bispecific antibody of claim 57 which is characterized by the amino acid sequence of SEQ ID NO: 18.

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66. A pharmaceutical composition comprising the antibody or fragment or derivative thereof of claims 39 to 52, and/or the antibody or fragment or derivative thereof of any one of claims 56 to 65.

67. A method for the treatment or prevention of autoimmune diseases, immune deficiencies, T-cell -malignancies, infectious diseases or for the suppression of immune response-preferably in order to avoid graft rejection after organ transplantation said method comprising the step of administering an antibody or fragment or derivative thereof of any one of claims 39 to 52, and/or of any one of claims 56 to 65.

68. A method for the treatment or prevention of malignancies, viral infections or other infectious diseases said method comprising the step of administering an antibody or fragment or derivative thereof of any one of claims 39 to 52, and/or of any one of claims 56 to 65.

69. A method for the enhancement or suppression of NK-cell dependent immunity or for the treatment of NK-cell derived malignancies said method comprising the step of administering an antibody or fragment or derivative thereof of any one of claims 39 to 52, and/or of any one of claims 56 to 65.

Concl
gr 70. A kit comprising the antibody or fragment or derivative thereof of claims 39 to 52, and/or the antibody or fragment or derivative thereof of any one of claims 56 to 65. ~~44~~